

### 3.1-3.3 Trig. Review

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Convert from degrees to radians. Leave answers in terms of  $\pi$ .

1)  $-90^\circ$  1) \_\_\_\_\_

2)  $570^\circ$  2) \_\_\_\_\_

Convert the radian measure to degree measure. Use the value of  $\pi$  found on a calculator and round answers to two decimal places.

3)  $\pi/5$  3) \_\_\_\_\_

4)  $-2.2853$  4) \_\_\_\_\_

Assume that  $\theta$  is an acute angle in a right triangle satisfying the given conditions. Evaluate the indicated trigonometric function.

5)  $\sin \theta = \frac{6}{7}$ ;  $\cos \theta$  5) \_\_\_\_\_

Give the exact value.

6)  $\cot \frac{\pi}{6}$  6) \_\_\_\_\_

7)  $\sec \frac{\pi}{4}$  7) \_\_\_\_\_

8)  $\csc 60^\circ$  8) \_\_\_\_\_

Use a calculator to find the function value to four decimal places.

9)  $\cos 31.5^\circ$  9) \_\_\_\_\_

Use a calculator to evaluate the function. Round your answer to 4 decimal places.

10)  $\sin 0.1331$  10) \_\_\_\_\_

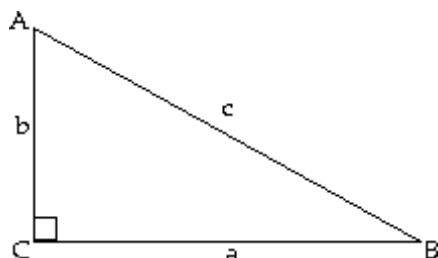
Solve the equation.

11) Solve  $\sin \theta = \frac{1}{2}$  for  $\theta$ , where  $0^\circ \leq \theta \leq 90^\circ$ .

11) \_\_\_\_\_

Solve the right triangle for all missing sides and angles to the nearest tenth.

12)



$c = 20$

$B = 26^\circ$

12) \_\_\_\_\_

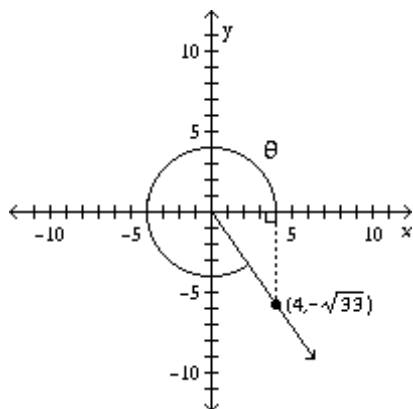
Find the measures of two angles, one positive and one negative, that are coterminal with the given angle.

13)  $108^\circ$

13) \_\_\_\_\_

Find the trigonometric function value for the angle shown.

14)  $\cos \theta$



14) \_\_\_\_\_

Suppose that  $\theta$  is in standard position and the given point is on the terminal side of  $\theta$ . Give the exact value of the indicated trig function for  $\theta$ .

15)  $(9, 12)$ ; find  $\sin \theta$ .

15) \_\_\_\_\_

Determine whether the given function is positive or negative for values of  $t$  in the specified quadrant.

16) Quadrant III,  $\tan t$

16) \_\_\_\_\_

Determine the sign (positive or negative) of the given value without use of a calculator.

17)  $\sin 171^\circ$

17) \_\_\_\_\_

Give the exact value.

18)  $\cos 150^\circ$

18) \_\_\_\_\_

Evaluate without using a calculator by using ratios in a reference triangle.

19)  $\sin \frac{5\pi}{3}$

19) \_\_\_\_\_

Evaluate without using a calculator.

20)  $\tan \alpha$ , if  $\sec \alpha = \frac{7}{4}$  and  $\csc \alpha < 0$

20) \_\_\_\_\_

Find the value of the unique real number  $\theta$  between 0 and  $2\pi$  that satisfies the given conditions.

21)  $\cos \theta = -\frac{\sqrt{2}}{2}$  and  $\tan \theta > 0$

21) \_\_\_\_\_

Solve the problem.

22) The radius of a car wheel is 18 inches. How many revolutions per minute is the wheel making when the car is travelling at 45 mph. Round your answer to the nearest revolution.

22) \_\_\_\_\_